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ABSTRACT

The issue addressed by this paper is the lack of empirical research on the class theories of Karl Marx and Ralf Dahrendorf. In order to bridge this gap, data are analyzed on the theoretical and statistical implications of Marx's theory (which focuses on ownership of the means of production) and Dahrendorf's theory (which focuses on authority in the workplace). It is hypothesized that Marx's and Dahrendorf's class models are more relevant to contemporary stratification theory than is generally realized by researchers. A model is constructed based on quantitative notions of stratification by sociologists Peter Blau and Otis Dudley Duncan. The basic Blau-Duncan model measured American occupational structure in terms of education, occupational status, number of siblings, personal income, job satisfaction, union membership, and class identification. For the present study, data were gathered from National Opinion Research Center surveys in the United States and Great Britain from 1973-76. Subjects were asked about Blau-Duncan stratification variables and about broader socio-political attitudes. Responses were compared to Marx's and Dahrendorf's predictions for income inequality, class consciousness, and class conflict, and then were analyzed according to the Blau-Duncan analytical framework. Findings indicated that Marx's and Dahrendorf's models have (1) important independent effects on income of male workers, and (2) substantial effects on class consciousness and conflict. The conclusion is that the theoretical traditions of Marx and Dahrendorf and the empirical research tradition of the Blau-Duncan status stratification model can be combined to increase understanding of stratification and its consequences. (Author/DB)

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MARX AND DAHRENDORF ON INCOME INEQUALITY, CLASS CONSCIOUSNESS AND CLASS CONFLICT: AN EMPIRICAL TEST*

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MARX AND DAHRENDORF ON INCOME INEQUALITY, CLASS CONSCIOUSNESS AND CLASS CONFLICT: AN EMPIRICAL TEST*

Abstract The class theories of Karl Marx and Ralf Dahrendorf have been the subjects of much theoretical debate but little empirical research and are largely ignored in the dominant line of quantitative research on stratification following the Blau-Duncan tradition. This paper seeks to bridge this gap by drawing out the theoretical and statistical implications of Marx's theory, which focuses on ownership of the means of production, and Dahrendorf's, which focuses on authority in the workplace; by testing their predictions for income inequality, class consciousness and class conflict; and by indicating how they can be incorporated into the Blau-Duncan model. Using survey data from several large United States samples, we show that both Marx's and Dahrendorf's quite different class models have important independent effects on men's income, increasing the explained variance by almost half again over the Blau-Duncan model. In contrast, they have little influence on women's income, a difference which explains a quarter of the gap between men's and women's incomes. Marx's and Dahrendorf's predictions about consequences for class consciousness and conflict are also supported by the data but the effects are modest, suggesting that the American public exhibits only a limited level of class consciousness. We also present data from Great Britain which confirm the American results, showing strong effects on men's income and substantial effects on class consciousness and conflict. The British data also permit an analysis of the transfer of class position from one generation to the next which suggests the existence of two parallel, but rather distinct, stratification systems, one a class system based on Dahrendorf's authority and Marx's ownership of the means of production and the other a status system based on education and occupational status. We show that adding these variables to the Blau-Duncan model greatly increases both our understanding of stratification and our ability to explain its consequences.

The field of social stratification has advanced dramatically with the emergence of a cumulative tradition of research based on the Blau-Duncan (1967) paradigm. This paradigm has been rapidly expanded in several directions to include new aspects of family background (e.g., income, number of siblings), new variables intervening between family background and later consequences (e.g., aspirations, IQ, the influence of significant others), and changes over time (e.g., occupation and income at different stages in a career, work experience, life cycle influences) but has, however, only slowly expanded beyond the traditional triumvirate of stratification variables--education, occupational status, and income--to include other bases of stratification. In this paper we propose the extension of the Blau-Duncan paradigm to include two theoretically important dimensions of stratification stemming from the hierarchical organization of work--ownership of the means of production and the exercise of authority in the workplace. Each of these concepts has been the primary focus of a major theoretical tradition; ownership of the means of production is the central focus of the class theory of Karl Marx while the exercise of authority is the defining feature of Ralf Dahrendorf's conception of class.

Marx sees the class structure of any historical epoch as defined by relationships to the means of production. Modern bourgeois society becomes polarized into two camps: the bourgeoisie, which owns and controls the means of production and purchases the labor power of others, and the proletariat, which neither owns its own means of production nor purchases labor power but must sell its own labor power in order to sustain itself. The dialectical opposition of these classes constitutes the driving force of modern history (1849:28-9; 1859:20-1; Marx and Engels, 1848:16-7; 1932).

Dahrendorf claims, in contrast to Marx, that in modern "post-capitalist society" property relations (i.e., relations of production) are merely one aspect of the more general and fundamental phenomenon of authority relations; that all class conflict is conflict between two groups, of which one exercises authority and the other is only subject to authority; and that it is conflict based on authority relations

which is endemic in modern industrial societies (1959:166-74).

Although Marx's and Dahrendorf's class theories have been the subjects of considerable theoretical debate,[1] to date there has been little attempt to test them empirically;[2] our primary goal in this paper is to bridge this gap. We limit ourselves to testing the two theories as they relate to income inequality and some aspects of class consciousness and class conflict since our primary interest is in their implications for social stratification and neither space nor the limitations of our data allow a full test of these rich and multifaceted theories. We have four specific objectives. First, we propose an analytic framework in terms of which Marx's ownership of the means of production and Dahrendorf's exercise of authority may be defined and operationalized, and draw out the theoretical and statistical implications of these models for each other and for other class models found in the literature. Second, we test Marx's and Dahrendorf's predictions about, and the utility of their theories in explaining variance in, income inequality and the theoretically central variables of class consciousness and class conflict. We consider men and women separately, uncovering an important source of the income inequality between the sexes, and replicate this part of our analysis on data from Great Britain as well as the United States.[3] Third, we propose a modification and extension of Dahrendorf's theory, suggesting that authority can best be conceptualized as a matter of degree (so that there are more than just two authority classes) and offering a theory about the relation between authority and income. Fourth, we argue that there are two parallel but distinct stratification systems in modern society, one the familiar status stratification system focusing on education and occupational status and the other a system rooted in the hierarchical organization of work and focusing on ownership of the means of production and authority; that both are necessary for understanding income inequality, class consciousness and class conflict; and that the Blau-Duncan model can easily, and should, be extended to these bases of stratification, which it has previously neglected.

The Marxian[4] Class Model

Class Defined In Marx's analysis the criteria that distinguish one class from another are ownership of the means of production and purchase of the labor power of others as opposed to sale of one's own labor power. In modern bourgeois society three classes are defined on this basis. Capitalists own or control the means of production and purchase the labor power of others; workers neither own the means of production nor purchase the labor power of others but instead sell their own labor power; finally, the minor and transitional class of the petit bourgeoisie owns the means of production but does not purchase the labor power of others.[5] A much discussed difficulty with Marx's original definition is that some of the people who in fact control the means of production do not own them, legal ownership belonging instead to stockholders who take no active part in management (Berle and Means, 1967). We classify those who control but do not own the means of production as capitalists since in practice they usually have effective control over their firms, can use them to further their own interests, and often own some stock in them; many neo-marxists argue that because of these features they stand in a similar structural, if not legal, relation to the means of production and share many interests in common with the capitalist class (e.g., Baran and Sweezy, 1966; Domhoff, 1967; Kolko, 1962; Mills, 1957; Zeitlin, 1974). In a modern economy, then, Marx's criterion of ownership of the means of production may be reasonably expanded to include all forms of control of the means of production, whether they stem from legal ownership or not; for terminological simplicity we will refer to this as "control of the means of production."

Consequences Classes, for Marx, must not be equated with income groupings; they are not defined by either the "sources of revenue" or the "size of purses;"[6] This would lead to an "infinite" number of "classes" (1893:862-3). Yet the exchange relationship between the capitalist and the worker is inherently unequal:

> The labourer receives means of subsistence in exchange for his labour power, but the capitalist receives, in exchange for his means of subsistence, labour, the productive activity of the labourer, the creative force by which the worker not only replaces what he consumes, but gives to the accumulated labour a greater value than it previously possessed (1849:31; emphasis in original).

And it is clear that one of the consequences of this unequal exchange, although for Marx not the most important, is inequality in income. As bourgeois society develops, accompanying the "accumulation of wealth at one pole," is the ever increasing "accumulation of misery at the opposite pole..." (1867b:708-9).[7] Following Marx, we expect substantial differences in income between classes in the United States--"the most modern form of bourgeois society" (1859:210).

The consequences of class position for income inequality are, however, mostly tangential to Marxian class theory, which is more concerned with the forms of class conflict generated within the class structure. As Marx conceives them, objective classes have conflicting interests by virtue of the exploitative nature of class relations but, although the relation between capitalists and workers in modern bourgeois society is inherently conflictual, consciousness of these conflicting interests may vary and members of classes may or may not be aware that they constitute a class and share common interests "in hostile opposition" to those of another class (1852:515-6). Hence the distinction between class "in itself" and class "for itself."[8]

Marx is vague in detailing mechanisms whereby a class becomes conscious of its interests although he mentions, as factors conducive to it in bourgeois society, the simplification of the class structure by the submergence of the petit bourgeoisie within the proletariat, the blurring of distinctions within the proletariat, and the widening of the gap in wealth between the bourgeoisie and the proletariat (Marx, 1867:708-9; Marx and Engels, 1848:22ff; Giddens, 1973:35).

One of the immediate effects of objective class is on work-related attitudes and behavior, such as job satisfaction and union membership. A full delineation of Marx's concept of "alienation" is beyond the scope of this paper (see, for example, Blauner, 1964; Giddens, 1971), however, one aspect of this is the alienation of

workers from control of the product of their labor and by virtue of this, their alienation from the work process itself. In one of his "early works"--the Economic and Philosophic Manuscripts of 1844 (1932:70-2)--Marx argues:

> (T)he worker is related to the product of his labour as to an alien object...In the estrangement of the object of labour is merely summarized the estrangement, the alienation, in the activity of labour itself.... labour is external to the worker, i.e., it does not belong to his essential being;....in his work, therefore, he does not affirm himself but denies himself, does not feel content but unhappy, does not develop freely his physical and mental energy but mortifies his body and ruins his mind (emphasis in original).

Marx later developed his concept of the alienation of the worker from the product of his labor into the labor theory of value (e.g., 1939:96-102) and in this sense did not abandon it in his later work. It is a safe conclusion that he would expect workers to be far less satisfied with their jobs than employers. The dissatisfaction of individual workers with their position vis à vis individual capitalists, with their subjugation to the machine, and with their subsistence level wages inevitably leads to conflict, which in advanced capitalist society more and more takes the form of a class struggle (Marx and Engels, 1848:24ff). In this struggle, trade unions (and working class parties) constitute a vanguard in heightening the revolutionary consciousness of the proletariat (Marx and Engels, 1848:23-4). One indicator of the level of class consciousness of the proletariat, therefore, is the extent to which working class members belong to unions, although we note, first, that the "bread and butter" program of the American labor movement is a far cry from the Marx's hopes for the First International (1864:374-81; 1871:386-9), and secondly, that some individuals are forced by "closed shop" rules to join unions regardless of their own attitudes toward them.

For Marx, "Every class struggle is a political struggle" (Marx and Engels, 1848: 24) and political parties, like trade unions, are the advance troops of the revolution (1871:388; Marx and Engels, 1885:106-17). Thus class position should influence party preference and at least some political attitudes such as attitudes toward labor leaders, attitudes toward the managers of large companies, or self-assessed liberalism/conservatism.

Dahrendorf's Class Model

Class Defined In Dahrendorf's (1959:166-74) analysis, classes are distinguished on the basis of their relations to authority. Members of the command class[9] exercise authority (regardless of whether they are subject to it themselves), i.e., they have subordinates in the workplace; obey class members are subject to the authority of others, and exercise none themselves, i.e., someone supervises them at work and they do not supervise anyone;[10] finally individuals in the small and marginal classless group neither exercise authority nor are subject to it, i.e., they work on their own. These classes are defined by Dahrendorf with respect to the industrial sphere but for him all "imperatively coordinated associations" (e.g., the family, unions, sports clubs) are characterized by two classes defined by authority relations. Thus he conceives of a multiplicity of classes depending on the number of such associations in the society (1959:198), a position for which he has received considerable criticism (see, in particular, Giddens, 1973:73). Dahrendorf may also be criticized for largely ignoring the matter of which of an individual's many class associations are likely to be salient to him/her. He does, however, mention that "since the authority relations of industrial production occupy so large a space in the lives of so many people, they tend to overshadow the authority relations of most, if not all, other associations" (1959:142-3). Our analysis here is confined to this central concept of industrial class, that is, authority relations in the workplace.

Although Dahrendorf minimizes his differences with Marx and seeks to portray relationships to the means of production as a specific case of the more general phenomenon of authority relations (1959:136-7), he actually advances a quite different concept of class, as can be seen in Figure 1, where we have labeled each

(Figure 1 about here)

aspect of the hierarchical organization of work according to the specifications of the theorist who most emphasized it in his class model. Marx's model stresses the control dimension of hierarchical position in the workplace while Dahrendorf's emphasizes the authority dimension. We apply these labels to the respective

	Exercises authority over others (two or more levels of subordinates)	Exercises authority over others (one level of subordinates)	Does not exercise authority (no subordinates)
Panel A. Marx			
Controls the means of production (no supervisors)	employer	employer	petit bourgeois
Does not control the means of production (one or more levels of supervisors)	worker	worker	worker
Panel B. Dahrendorf			
Controls the means of production (no supervisors)	command	command	classless
Does not control the means of production (one or more levels of supervisors)	command	command	obey
Panel C. Modified Dahrendorf			
Controls the means of production (no supervisors)	upper command	lower command	classless
Does not control the means of production (one or more levels of supervisors)	upper command	lower command	obey
Panel D. Wright and Perrone			
Controls the means of production (no supervisors)	employer	employer	petit bourgeois
Does not control the means of production (one or more levels of supervisors)	manager	manager	worker

Figure 1. Operationalizations of "class" as conceived by Marx and Dahrendorf; modified Dahrendorf model; and Wright and Perrone's class categories.

components of hierarchical position illustrated in the figure. Following Marx, we operationalize the control dimension as a dichotomy (and test this against a continuous model later in the analysis). Although dichotomous for Dahrendorf, the authority dimension is illustrated as a trichotomy to preserve comparability with our modified version of his theory which is described later. By comparing panels A and B of Figure 1, one can see that Marx's distinction between classes based on ownership or control of the means of production is lost within Dahrendorf's command class; similarly Dahrendorf's distinction between command and obey classes is lost within Marx's worker class. Essentially, Marx focuses on the top of the organizational hierarchy, asking whether someone is at the top or is, instead, subject to a boss's control while Dahrendorf focuses on the bottom of the organizational hierarchy, asking whether someone is at the very bottom, with no authority whatsoever or has, instead, at least one subordinate. Each uses the other's criterion only to separate out from his main analysis a small and marginal class which Marx calls the petit bourgeoisie and Dahrendorf defines as classless. The result is that Marx misses what is for Dahrendorf the key class boundary while Dahrendorf misses what is for Marx the key boundary. Moreover, although there is some overlap, Marx's and Dahrendorf's models are statistically as well as theoretically distinct. We later show that class position by Marx's criterion is only modestly correlated with class position by Dahrendorf's and, crucially, that the two class models usually have independent, and sometimes quite different, effects on the various dependent variables we consider.

Consequences Classes in Dahrendorf's sense, as in Marx's, are "not based on the level or source of income" (1959:138) and Dahrendorf is ambivalent about the existence of a causal connection between class and income. On the one hand, he explicitly leaves open whether class is a cause of income or whether the correlation between them is due to some common factor (e.g., Parsons' "value system") underlying both (1959:139-40) but, on the other hand, he claims that authority, which defines class, is a determinant of income (1959:139). On balance, it is

reasonable to say that, controlling for the variables which we include in our analysis, Dahrendorf expects a connection between class and income.

For Dahrendorf, as for Marx, class relations inherently involve conflicting interests, the commmand class having an interest in "the maintainence of a social structure that for them corveys authority," while the obey class's interests are in "changing a social condition that deprives its incumbents of authority" (1959: 174-6). However, interests may be only "latent" (i.e., more or less unconscious) or they may be "manifest" (i.e., conscious) in which case class members may mobilize around them (1959:178-9). Classes having only latent interests are "quasi-groups" and constitute the recruiting fields for "interest groups," which have manifest interests. Dahrendorf sees his concept of classes as quasi-groups and interest groups as analogous to Marx's concept of classes "in" and "for" themselves (1959:182). Although, like Marx, he is imprecise in specifying the conditions under which latent interests develop into manifest ones (see Turner, 1973), he does argue that classes will be more conscious of their interests and class conflict more intense when class position in one sphere overlaps with class position in other spheres, or with other lines of differentiation and predicts that consciousness and conflict will be stronger where the command class of industry is considerably wealthier than the obey class (1959:215-8, 242).

According to Dahrendorf, the most important, indeed the only, consequences of industrial class are for attitudes and behavior related to the immediate work situation. His conception of the conflicting interests of the participants in industry in maintaining or overthrowing its authority structure leads to the prediction that obey class members, other things being equal, will be less satisfied with their jobs than command class members. By expressing this dissatisfaction and the manifest interests of the obey class, unions play a crucial role in industrial conflict. Dahrendorf expects on this basis that they should be supported disproportionately by the obey class, but notes that through the formation of unions industrial conflict becomes "regulated" and "loses some of its intensity and violence" (1959:258-9).

While Marx sees every class struggle as a political struggle, Dahrendorf argues, in contrast, that in modern-day "post-capitalist society" there has developed an "institutionalization of industry" and an "isolation of industrial conflict" from political conflict with the result that "the participants of industry, upon leaving the factory gate, leave behind them with their occupational role their industrial class interests also." Furthermore, he contends that "the notion of a workers' party has lost its political meaning." He consequently predicts that industrial class membership will have no effect on political attitudes or behavior (1959:271-6).

Modification and Extension of Dahrendorf

As we have seen, Dahrendorf has little to say about the relation between authority and income, a matter tangential to his concerns. We propose a theory about that relation, extending Dahrendorf's anlysis. Our theory implies that authority is best thought of as a matter of degree rather than as a simple dichotomy and so involves some modification to Dahrendorf's original conception. The theory turns on human capital and marginal productivity.[11]

The well known human capital theory treats the acquisition of education, experience, skills, knowledge, and contacts on the job as investments analogous to investments in ordinary physical capital and applies standard economic reasoning to them concluding that, among other things, individuals will not make such investments unless they are compensated for them with a return at least as large as they could get from conventional investments in physical capital. There is clear evidence that this is in fact the case throughout the world (e.g., Mincer, 1974, Chs. 4 and 5; Psacharopoulos, 1973). This argument can be extended to authority.[12] In general, supervisors have more job related skills and knowledge than those they supervise, if only because they generally can perform the tasks of non-supervisory employees as well as the additional tasks of supervision. But the same argument applies to the higher reaches of the supervisory hierarchy. For example, second level supervisors -- individuals who supervise the supervisors

of ordinary employees -- will generally have the skills of those they supervise but, in addition, skills beyond those, e.g., in management, finance, planning, customer relations. This implies that a firm must pay second level supervisors more than first level ones, and so on throughout the supervisory hierarchy.

There is a long established theory that employees are paid more or less according to their marginal productivity, i.e., according to how much their work contributes to the firm's income (e.g., Rees, 1973:Chs. 4 and 5). This implies that supervisors[13] will in general receive higher incomes than employees who do not supervise quite apart from human capital considerations, since in most circumstances variations in the ability, diligence, and motivation of non-supervisory employees have less influence on output than similar variations among supervisors, for several reasons. First, people who supervise often have more discretion in the way they perform their roles than do those who do not supervise, allowing more room for variation in supervisors' behavior than in employees'. Second, when one employee does poorly that often has little effect on other employees' productivity but when a supervisor does poorly that will often affect the production of all his or her supordinates; thus total productivity depends additively on non-supervisory employees' performances and multiplicatively on the supervisors' and, as Stinchcombe and Harris (1969) have shown, that implies higher marginal productivity for supervisors, and so higher pay. The same arguments clearly apply throughout the supervisory hierarchy so, for example, second line supervisors will have higher marginal productivity and so higher pay than first line supervisors.

Both these arguments imply that supervisors will be paid more than non-supervisory employees, which is perfectly compatible with Dahrendorf's analysis, but equally that second line supervisors will be paid more than first line supervisors (and so on up the hierarchy), which is not consistent with Dahrendorf's explicit insistence that there are no distinctions among supervisors (i.e., within the command class). In Dahrendorf's theory, as in Marx's, classes are discrete entities separated from each other by clear, qualitative differences; there is not a gradual

continuum from low to high as with occupational status but an abrupt boundary between them and he flatly states that "authority does not lend itself to the construction of a scale" (1959:171). But we, following Blau (1974:632), argue that authority is better conceptualized as a matter of degree and propose that his theory should be modified to allow for these distinctions among supervisors (i.e., to distinguish between the lower command class who supervise only non-supervisory employees, the higher command who supervise the lower, and so on, data permitting; this is shown graphically in Figure 1). We will later show that this modification does noticeably better than Dahrendorf's original in explaining income inequality and is equally effective in other contexts. Furthermore, the modification is consistent with Dahrendorf's basic logic, since he argues that there are inherent differences in objective interests between the command and obey classes (e.g., between foremen and workers), and a similar analysis would suggest parallel differences between the higher and lower command classes (e.g., between managers and foremen), as indeed is implicit in his discussion of foremen and bureaucrats (1959:256, 262, 287).

Wright and Perrone's "Marxist Class Categories"

Wright and Perrone (1977) have recently proposed what they claim is an extension of the traditional Marxian class model by introducing, as a "buffer" group between employers and workers, a manager class (i.e., those who do not own the means of production but have at least one level of subordinates below them; see Figure 1).[14] But we argue that their typology is, in fact, only an alternative way of combining the traditional Marxian class model with Dahrendorf's model and its effectiveness depends as much on the latter as on the former. Their employer and petit bourgeois classes are exactly Marx's, and their sole modification of his scheme is to divide the working class in two in a way that exactly corresponds to Dahrendorf's division between the command and obey classes. Hence using both Marx's and Dahrendorf's conceptions of class leads to exactly the same division of the population (readers may convince themselves of this by superimposing panels A and B of Figure 1 and comparing this to panel C). There is no class distinguished using Wright and Perrone's

scheme that could not be distinguished with Marx and Dahrendorf combined, and vice versa. It is well known that such alternative parameterizations necessarily predict exactly the same variance in other variables and so cannot be distinguished empirically on that count.

Moreover, we will show that employers have high incomes not only because the own the means of production but also because they exercise authority. Hence employers' pay (and analogously, their political and other attitudes and behavior) does not simply reflect their relation to the means of production, as Marx and Wright and Perrone would have it. The true effects of owning the means of production can only be discerned by controlling (in the usual statistical sense) for authority by including it explicitly in the analysis.[15] This can easily be accomplished by making ownership of the means of production one variable and the exercise of authority a second variable, and using standard multivariate techniques for separating their effects. But Wright and Perrone's typology, like other typologies, does not lend itself to such techniques. By using a typological, rather than a variable, approach they leave themselves with no practical way of discovering the effects of Marx's key theoretical variable, ownership of the means of production.

Furthermore, Marx's and Dahrendorf's schemes are theoretically preferable to Wright and Perrone's. Parsimony does not favor either since they make exactly the same distinctions, albeit under different labels.[16] But historical priority clearly goes to Dahrendorf's modification of Marx which was fully developed several decades before Wright and Perrone's. Furthermore, Wright and Perrone are mainly concerned with the consequences of class for income inequality, while Dahrendorf's theory is more fully elaborated and comprehensive, extending to a wider range of consequences and to forms of stratification beyond that of the industrial sphere.[17]

On balance, we reject Wright and Perrone's conceptualization as non-Marxian in favor of an analysis which treats both Marx's ownership of the means of production and Dahrendorf's authority in the workplace as conceptually and statistically distinct aspects of the hierarchical organization of work, and determines the independent

effects of each. We now turn to the data with which we test these theories.

DATA AND METHODS

NORC's General Social Surveys

The data are from the National Opinion Research Center's 1973, 1974 and 1976 General Social Surveys.[18] These are national samples of the non-institutionalized population of the United States, 18 years of age or older, conducted in the spring of each year; we have merged them into a single file. They are multistage probability samples to the block level with quotas based on sex and age within blocks[19] (NORC, 1973; 1974; 1976). Analysis is confined to the 1,120 men and 598 women who were employed full-time and who responded to questions about their hierarchical position. We further restrict our analysis to full-time employed persons to ensure maximum comparability in our separate analyses of men and women since a disproportionate number of women who worked did so only part-time.[20] The correlations, means, and standard deviations for the main variables used in subsequent analysis are given in the appendix; a more complete matrix, too large to present here, is available on request.

Measures: Analytic Framework

Our analytic framework differentiates two conceptually, and as we show, statistically, distinct components arising from the hierarchical organization of work, Marx's control of the means of production and Dahrendorf's exercise of authority in the workplace. While Marx and Dahrendorf, as we have shown, take each other's criteria into account, if only to separate out a peripheral and somewhat anomolous classless or petit bourgeoisie group, we claim on theoretical grounds and will demonstrate empirically that the hierarchical organization of work is most fully represented by taking into account the independent effects of both of their criteria.

We determine the hierarchical position of individuals on the basis of their answers to questions on the number of levels of supervisors above them (i.e., the control component since those who have no supervisor control the means of production and those who are supervised do not control them) and the number of levels

of subordinates below them (i.e., the authority component). This allows us to distinguish each of the cells in Figure 1 and so define our key variables.[21]

Marx: Control of the Means of Production On the basis of their answers to these two questions, we can make a reasonable approximation to Marx's scheme by classifying as employers[22] those who control the means of production and purchase the labor power of others, i.e., who have no supervisors above them and at least one level of subordinates below them; classifying as workers those who neither control the means of production nor purchase the labor power of others but merely sell their own labor power, i.e., who have at least one supervisory level above them (regardless of the number of subordinates below them); and finally classifying as petit bourgeois those who control the means of production but do not purchase labor power. These definitions are set out schematically in Figure 1 above. In subsequent analysis, we score employers one and workers zero and deal with the petit bourgeoisie separately.

The operationalization follows Marx closely except that our employer class includes a small percentage of executive or managing directors of companies in addition to employers who personally own their company, since executive directors, who are responsible only to shareholders, would most likely respond to our question by saying that they have no supervisors on the job. A comparison of our employer class with that of an earlier study which included additional data on self-employment (Wright and Perrone, 1977) suggests that less than 20 percent of our employer class are actually executive directors and it seems reasonable to include such directors within the employer class, for reasons discussed earlier. Note that our employers are almost all relatively small businessmen and businesswomen working full-time at their jobs, not idle shareholders, and so in practice do essentially the same work as executive directors. We call our operationalization of Marx "control of the means of production", a term embracing both legal owners and executive directors.[23]

Dahrendorf: Authority in the Workplace Following Dahrendorf closely, we

define the command class as those who exercise authority to any degree in the workplace, i. e., who supervise others (regardless of whether they themselves have supervisors); we define the obey class as those who are only subject to authority, i.e., who are subject to supervision but themselves supervise no one; finally, we define as classless those who neither exercise nor are subject to authority, i.e., those who neither supervise nor are supervised (see Figure 1). We score the command class one and the obey class zero (and treat the classless group separately).

The petit bourgeoisie or classless group Since we found that distinguishing the petit bourgeoisie (or classless group for Dahrendorf) added virtually nothing to the variance explained in income or (with one or two exceptions which we note later) in attitudes, we have, for simplicity, ignored this distinction in our analysis. This has the effect of grouping the petit bourgeoisie and worker class together in the Marxian scheme--an outcome which is consistent both with Marx, since he expects they will "sink gradually into the proletariat" in advanced capitalist society (Marx and Engels, 1848:23), and with their actual income. In Dahrendorf's scheme our decision results in classless individuals being grouped with the obey class, which seems generally reasonable given that they closely resemble the obey class in income.[24] We also ran alternative analyses in which the petit bourgeoisie were excluded from the sample altogether and other analyses treating them as a separate, distinct class and obtained results essentially identical to those reported in text; details are avialable on request. We do not endorse the procedure of excluding the petit bourgeoisie from the analysis altogether since in other societies or historical contexts this group may play a larger role which must be considered.

Improvements in Dahrendorf's Model We argued above that there are good reasons for believing that authority is better conceived as a matter of degree and that Dahrendorf's model could usefully be extended to do that. We will call this the "improved Dahrendorf" model, defining the upper command class as those who supervise persons who themselves supervise others, i.e., second line supervisors or higher; the lower command class as those who supervise workers who are not themselves

supervisors, i.e., first line supervisors; finally, the obey class as those who supervise no one. In principle we would prefer a strictly continuous measure distinguishing people by the number of levels of subordinates and so separating the upper command class into those who supervise two levels, those who supervise three levels, etc., but there are doubtless very few who actually supervise three or more levels so the trichotomy we use here is a reasonable approximation. We will, however, refer to this as the "continuous" version of authority to emphasize our theoretical preference. In the analysis that follows we score the top of the hierarchy one (the upper command class), the middle one half (the lower command class), and the bottom zero (obey class).

Nine-Category Dummy Variable Model We also use a dummy variable scheme which assigns a dummy variable to each possible combination of the two defining variables, i.e., each of the three levels on the supervisor variable cross-tabulated by each of the three levels on the subordinate (see footnote 21), giving nine cells (only eight dummy variables are used in the analysis, the ninth being implicit in the other eight). This scheme includes all possible nonlinearities and interactions between the two defining variables, and so gives the maximum possible effect that these variables can have on our various dependent variables (e.g., Farkas, 1976:476). It provides a useful standard against which to compare the explanatory power of the other, simpler, models by allowing us to judge how close they come to exhausting the information provided by our two quesions on hierarchical position in the workplace.

Other Measures The key variables in the basic Blau-Duncan model are coded in the usual manner. Father's and respondent's education are measured in years of schooling. For father's and respondent's occupational status we use Duncan's (1961) SEI index[25] which is essentially an average of income and education for each detailed census occupation. Number of siblings is the number of brothers and sisters, including step-brothers and sisters and adopted siblings. Personal income (available only in the 1974 and 1976 surveys) is job earnings, before taxes or other deductions, for the year preceding the survey year. It is coded into twelve categories,

ranging from under $1,000 to $25,000 or over, and we use the mid-point of each category to convert it into dollars (except for the highest open-ended category which we estimated at $30,000). To correct for inflation between the two survey dates, we converted income to 1975 dollars using the consumer price index (U. S. Bureau of the Census, 1976:433).

Class identification is the respondent's self-assignment to a choice of four classes--lower, working, middle, and upper (following Centers, 1949).[16] Two measures of work-related attitudes and behavior are employed. Union membership is whether or not the respondent belonged to a trade union. Job satisfaction is whether the respondent was generally satisfied or dissatisfied with the work he/she does, the four responses ranging from very dissatisfied to very satisfied.

Finally, several broader socio-political attitudes are analyzed. Respondents were asked whether they had "hardly any confidence at all," "only some confidence," or "a great deal of confidence" in the people running 1) major companies and 2) organized labor. Political party identification ranges in six categories from strong Republican to strong Democrat. Self-assessed political attitude (available only in 1974 and 1976) is self-placement on a seven point scale of political views from extremely conservative to extremely liberal.

All the subjective variables are scored so that the correlation with class position will be positive if the relation is in the direction predicted by Marx and Dahrendorf. In particular, higher scores are given to those who identify with the middle or upper classes, are satisfied with their jobs, do not belong to unions, have confidence in business, lack confidence in labor, prefer the Republican Party or have conservative political views. A positive correlation or regression coefficient with control of the means of production or authority thus indicates that people in the employer (or command) class have upper class, business oriented, politically conservative views.

Statistical Methods

Our causal model takes the key variables in the basic Blau-Duncan model--father's education and father's occupational status, number of siblings, and respondant's education--as causally prior to respondant's occupational status, control of the means of production, and authority. Causality among the last three variables is unclear since they are all aspects of respondents' work situation but, since status is a well-established variable, we will give it priority and assess the additional effect of control over the means of production and/or authority after taking the effects of occupational status (as well as family background and education) into account. We first regress the dependent variables (e.g., income, class identification, job satisfaction) on family background, education and status and then regress them on all these variables plus control over the means of production or authority (or some combination of those) in order to assess the increase in variance explained.

We estimate our models by ordinary least squares (OLS) regression methods. These assume that relations among variables are, to a reasonable approximation, linear and additive, and there is good evidence that this is a reasonable assumption for variables used in the Blau-Duncan model (e.g., Duncan, Featherman and Duncan, 1972) and in general (e.g., Boyle, 1971; Labovitz, 1967, 1970, 1971; Middleton, 1973; and the references cited therein). We will present evidence concerning nonlinearities and interactions involving control of the means of production and authority and show that the linear approximation is fully adequate.

RESULTS

Description of the American Class Structure

By a Marxian definition, the class structure consists of a small upper class and a much larger lower class, with eleven percent of the men being employers and eighty-one percent workers (the remainder, eight percent, are petit bourgeois; see Table 1). By Dahrendorf's definition the upper class is larger and the lower class

is correspondingly smaller; forty-four percent of the men are in the command class and forty-eight percent in the obey class (the rest are classless, the same group that Marx called the petit bourgeoisie). There are some interesting sex differences. Women are about half as likely as men to be in Marx's employer class (six percent compared with eleven for men), slightly more likely to be workers, and equally likely to be petit bourgeois. Women are also less likely than men to exercise authority in the workplace, particularly at higher levels where only nine percent of the women (compared to seven-
(Table 1 about here)
teen percent of the men) are in the upper command class supervising two or more levels of subordinates. These sex differences could be due to direct discrimination (e.g., Thurow, 1975:178-9), or to differences in preferences or in socialization (e.g., Horner, 1968; Mednick et al., 1975; Rossi, 1964), or to some combination of these and other factors. Unfortunately our data do not speak to this question.

There is only a modest overlap between class position as defined by Marx and as defined by Dahrendorf. About one quarter of Dahrendorf's command class are employers by Marx's definition, the remaining three quarters being workers in Marx's scheme (see Table 1). Put differently, the correlation between control of the means of production and authority is a modest .4, noticeably lower than, for example, the .6 correlation between education and occupational status, the key status variables in the Blau-Duncan model (see appendix for details on these and other correlations). Moreover, neither control of the means of production nor authority is at all closely linked to education, the correlation being a modest .1 for both. Finally, neither control of the means of production nor authority is closely related to occupational status, contrary to what one might expect. At any hierarchical level there are individuals with quite different occupations. At the higher levels we might find, for example, craftspeople with their own shops who exercise authority over their employees, and at the lower levels we might find accountants, lawyers, and engineers who have several levels of supervisors above them and no subordinates; there are remarkably few occupations which could not conceivably occur at any hierarchical level. Consequently occupational status is virtually uncorrelated with class in either Marx's or

Table 1. Mean Duncan socio-economic status scores by authority and control of the means of production; percentage of the total population in each cell is given in parentheses. For men and women separately; full time workers only.

	Dahrendorf: Authority in the workplace							
	Men				Women			
Marx: Control of the means of production	upper command	lower command	obey	(total)	upper command	lower command	obey	(total)
employers: control the means of production	61 (5%)	47 (6%)	40 (8%)[1]	53 (11%)[2]	44 (1%)	50 (5%)	42 (9%)[1]	49 (6%)[2]
workers: do not control the means of production	52 (12%)	44 (21%)	36 (48%)	40 (81%)	52 (8%)	48 (16%)	41 (61%)	44 (85%)
(Total)	55 (17%)	44 (27%)	36 (48%)[2]	42 (N=1120)	51 (9%)	48 (21%)	41 (61%)[2]	44 (N=598)

1. This is the petit bourgeoisie in Marx's scheme and the classless group in Dahrendorf's.
2. Excludes the petit bourgeoisie or classless group.

Dahrendorf's sense or even with both taken jointly. The mean occupational status of each cell in the crosstabulation of authority position and control of the means of production is given in Table 1 and shows little systematic pattern. The correlation between occupational status and these alternative concepts of class is quite modest (Eta = .3 for men and .2 for women, a figure equal to the multiple correlation between occupational status on the one hand and Marx's and Dahrendorf's classes on the other, with all interactions and nonlinearities in Marx's and Dahrendorf's classifications taken into account).

Class and Income

Controlling the means of production and exercising authority in the workplace both increase a man's income substantially. Adding them to the original Blau-Duncan model increases its ability to explain variations in men's income by almost half again (see Table 2). The basic Blau-Duncan variables explain just over twenty percent of the variance in men's income, in these data as in many other data sets (e.g., Duncan, Featherman, and Duncan, 1972), a disquietingly low figure as some have commented (Coser, 1976:36),that has lead to some speculation, perhaps pre-
(Table 2 about here)
mature, on the overwhelming importance of luck in determining income (Jencks et al., 1972). Adding Marx's control of the means of production alone increases the explained variance by about five percent (line 3). Adding Dahrendorf's dichotomous authority measure alone increases the explained variance almost as much and adding our improved continuous authority measure increases it even more, some seven percent (lines 4 and 5). Since Marx's and Dahrendorf's conceptions of class are quite distinct, adding them both to the basic Blau-Duncan model is substantially better than adding one or the other alone (lines 6 and 7). The continuous version of authority is again preferable to Dahrendorf's original dichotomous version and, combined with Marx's control, increases the variance explained by the original Blau-Duncan model by nine percent, half again the original figure. In fact, the continuous version of authority, when it alone is added to the Blau-Duncan model, is the single most important determinant of income

Table 2. Consequences of control of the means of production and of authority for personal income. For men and women separately; full time workers only.

	Men	Women
Panel A. Percent of variance explained, R^2		
1. Baseline: minimum model with father's education and occupational status, number of siblings, education, and occupational status	20.4	26.6
Panel B. Additional percent of variance explained by adding the indicated variables to baseline model 1		
2. Maximum: add full detail and all possible nonlinearities and interactions of control and authority	9.1*	2.2
3. Marx: control of the means of production	5.1*	0.0
4. Dahrendorf: authority (dichotomous)	4.6*	0.1
5. Improved Dahrendorf: authority (continuous)	7.0*,a	0.5
6. Marx and Dahrendorf: control & authority (dichotomous)[2]	7.0*,b,c	0.1
7. Marx and improved Dahrendorf: control and authority (continuous)	8.8*,d,e	0.5
Panel C. Standardized partial regression coefficients for Model 7		
Marx: control of the means of production	.148*,3	-.007
Improved Dahrendorf: authority (continuous)	.217*,3	.070
Father's education	-.064	-.041
Father's occupational status	-.001	-.023
Number of siblings	-.062	.006
Education	.173*,3	.341*
Occupational status	.234*	.252*
Panel D. Metric partial regression coefficients for Model 7		
Marx: control of the means of production (1=employer)	$3906*,3	-$155
Improved Dahrendorf: authority (1=upper command class)	$4902*,3	$1151

* Increment in R^2 over Model 1 is statistically significant at $p<.05$ or partial regression coefficient significantly greater than zero at $p<.05$.

1. Eight dummy variables representing the nine cells in the cross-tabulation of authority (continuous) and control (continuous version). See text for details.

2. Wright and Perrone's model necessarily explains the same variance as this model.

3. Difference between men's and women's regression coefficients is significant at $p<.05$.

a,b,c,d) The R^2 for the higher numbered model is significantly greater than that for the lower numbered model at $p<.05$. The comparisons are: a- model 5 versus model 4; b- 6 versus 3; c- 6 versus 4; d- 7 versus 3; e- 7 versus 5.

and when entered together with control of the means of production is second only to occupational status (Table 2, Panel C). Entry into the upper command class increases men's income by just under five thousand dollars and control of the means of production increases it by just under four thousand (Panel D).

Furthermore, it is clear that all of the influence of authority and control of the means of production is through the postulated linear and additive effects. Adding all possible interactions and non-linearities increases the explained variance by less than a third of one percent, a wholly insignificant figure (compare line 7 with 2). Modifying Marx in a way analogous to our modification of Dahrendorf does not change the results.[27] So in all, we conclude that the predictions of Marx,[28] Dahrendorf, and our improvements on Dahrendorf are supported by the data for men, with the improved continuous version of authority rather more important than Marx's control of the means of production. The same conclusions are reached if one considers the log of income, as is usual in economic analyses, and when various other variables are added to the Blau-Duncan model.[29]

Women's Income Surprisingly, neither exercising authority nor controlling the means of production offers any clear monetary rewards for women. This is quite unlike the situation for men. The effect of exercising authority is in the predicted direction but small and not statistically significant; however, contrary to prediction, belonging to Marx's employer class if anything lowers a womans' income, although this effect is exceedingly small and not significantly different from zero (Panels B and C, second column). Men who become employers increase their earnings by just under four thousand dollars while women may actually lose a small amount; men who move all the way up to a second line supervisory position from the bottom receive about five thousand dollars additional earnings while women receive only about a quarter of this and their increment does not diverge significantly from zero. The difference between the large rewards men receive from exercising authority or controlling the means of production and the small or nonexistant rewards women get is striking and statistically significant. These results are not

in accord with the predictions of Marx, Dahrendorf or our analysis of income and suggest either that the theories must be modified or, as is quite possible, that there are some striking differences in the kinds of firms that women own or control (e.g., smaller or less profitable than men's) and in the kinds of authority positions they obtain (e.g., ones where the skills required by supervisors differ little from those possessed by non-supervisory employees).

These results suggest some modifications to previous analyses of sex differences in income attainment. First, a variety of studies show that women earn less than men, other things being equal. Since women are less likely than men to be employers or to exercise authority in the workplace, a plausible suspicion is that this accounts for some of the income difference (Fligstein and Wolf, 1977). While this is true to a very limited extent, out data suggest that the more fundamental problem is that women do not receive the pay men do even when they do obtain such positions. It is not simply the modest differences in the distribution of authority positions, but the sharp differences in the process whereby these positions are converted into earnings that are responsible for some of the sex differences in earnings. Using the regression standardization procedure suggested by Duncan (1968), we find that sex differences in the distribution of control of the means of production and authority account for only two percent of the gap between men's and women's average income while differences in the process of converting control and authority into earnings account for fourteen percent of this gap. Taking both of these differences into account explains fully twenty-five percent of the gap between men's and women's earnings.[30] Secondly, the general consensus is that women's incomes are, on the whole, more closely tied to their educational and occupational attainments and family background than is true for men (Featherman and Hauser, 1976:478; Mincer and Polachek, 1974:S101; Suter and Miller, 1973:973; Treiman and Terrell, 1975a:195). But this appears to be true only because past analyses have neglected class in Marx's and Dahrendorf's senses, something that is crucial for men but virtually irrelevant for women. When these are added to the standard Blau-Duncan variables, the model explains

as much variance in men's income as women's (29 percent for both). Although the results may vary depending on which variables are included in the comparison, it seems likely that variation among men in authority position and in control of the means of production explains at least part of this particular sex difference.

Modifications to Dahrendorf The results for men offer considerable support for our modification of Dahrendorf which argues that first line supervisors should be paid more than ordinary workers for reasons to do with human capital and marginal productivity and, crucially, that second line supervisors should earn more than first line supervisors for the same reasons, i.e., that people in what we have called the upper command class should earn more than those in the lower command class. Dahrendorf argues to the contrary that there should be no differences within the command class, but we have seen that the evidence clearly supports our argument (compare model 5 with 4 or 7 with 6). This suggests either that Dahrendorf's conceptualization is wrong in this regard or that he should allow for differences within the command class corresponding to differences in amount of authority, a position that we earlier suggested is quite consistent with his basic argument. However the results for women are not in accord with Dahrendorf's theory or with our analysis and so leave the issue somewhat obscure.

Class Consciousness and Class Conflict

Although the limitations of our data and the imprecision of some of Marx's and Dahrendorf's theoretical conceptions preclude a complete test of their theories of class consciousness and class conflict, we can perform a limited but useful test of, first, the extent to which objective class postion leads to a sense of awareness of belonging to a particular class, and secondly, the extent to which it leads to a subjective perception of having interests which are different from (and possibly in conflict with) those of other classes. We can thus assess whether objective class position has consequences for subjective perceptions in the American public, which is a matter of considerable interest in its own right.[31]

By way of an overview, note that objective position as defined by the

conventional Blau-Duncan variables does not appear to be closely related to subjective perceptions (see Table 3, model 1). For men, objective position explains only twenty-one percent of the variance in simple self-assessed class position and much less than that for the other class consciousness variables we are dealing with (Table 3 about here) (an average of only 4.7%). Women's own objective position is even less important than for men(accounting for sixteen percent for class identification and an average of 3.5 percent for the other variables). Part of this is attenuation due to random measurement error, since these attitudinal variables are doubtless measured much less reliably than income which will markedly lower explained variance (e.g., Bohrnstedt and Carter, 1971), and for women it is not unlikely that their husband's characteristics are salient. Nonetheless, the decidedly modest link between the conventional objective measures of stratification and various subjective factors in the modern U. S. is striking. As far as we can tell, the results do not reflect an atypical choice of subjective variables--these NORC data include a deliberately varied and eclectic set of subjective variables originally suggested by a wide variety of researchers (NORC, 1972:i) and we have explored them at some considerable length, examining any that might by any reasonable logic be related to stratification or class, but finding few as closely related to objective position as those reported here.[32]

As a very rough summary, when the models of objective class position as defined by Marx and Dahrendorf are added to the Blau-Duncan variables, they increase the explained variance by something over one percent on the average, suggesting that objective class position, however defined, is just not closely related to subjective variables in the modern U. S. Although the increase in explained variance is small, it is nonetheless important (and statistically significant) for many of the subjective variables, particularly since the traditional stratification variables explain so little of the variance in the first place. We turn now to a detailed treatment of these matters.

Subjective Class Identification Among men, both Marx's and Dahrendorf's class models are significant determinants of subjective class identification, employers

Table 3. Control of the means of production and authority as determinants of class identification and attitudes relating to class conflict. For U. S. men and women separately; full time workers only.

	Men							Women						
	Class identif.	Job satisfaction	Union membership	Conf. in business	Conf. in labor	Political party ID	Political attitudes	Class identif.	Job satisfaction	Union membership	Conf. in business	Conf. in labor	Political party ID	Political attitudes
Panel A. Percent of variance explained, R^2														
1. Baseline: minimum Blau-Duncan model[1]	21.0	3.1	10.1	2.5	3.0	6.2	2.0	15.6	4.9	3.6	2.3	1.8	4.2	3.9
Panel B. Increase in R^2 from adding the indicated variables to Model 1														
2. Maximum: Model 1 plus all interactions, etc.	1.7*	1.6	6.4*	0.3	2.8*	1.4	1.2	0.7	2.4*	5.2*	1.4	2.6	3.8*	1.2
3. Marx: control	0.7*	0.4*	1.4*	0.0	1.5*	0.3*	0.4	0.0	0.0	0.4	0.2	1.8*	1.8*	0.1
5. Dahrendorf: authority[2]	1.1*	0.5*	1.5*	0.0	0.2	0.1	0.3	0.0	1.1*	1.2*	0.4	0.4	0.2	0.0
7. Marx & Dahrendorf[2,3]	1.2*	0.6	2.1*	0.1	1.5*	0.3	0.5	0.0	1.2	1.3	0.9	1.9	1.8	0.1

* Increment in R^2 over model 1 is significant at $p<.05$.

1. See Table 2 for complete description of variables.

2. Only the continuous (improved Dahrendorf) version of authority is used here but the dichotomous version explains just as much variance in these variables.

3. Wright and Perrone's model explains the same variance as this model.

and the command class being more likely to claim they are middle class, as predicted (Table 3, first comumn). But both of these effects are small. If income is taken as intervening between the other objective stratification variables and their subjective consequences, about half of the effect of both authority and control of the means of production is indirect through it, that is, about half the reason that employers and the command class identify themselves as middle class is that they earn more and individuals who earn more are more likely to identify with the middle class. This result is quite consistent with Marx, who argued that disparities in income between capitalists and workers lead to the development of a revolutionary consciousness among workers (Marx, 1867b:708-9; Marx and Engels, 1848:22ff), and with Dahrendorf, who argued that latent interests are more likely to become manifest when authority classes in the industrial sphere are superimposed upon economic inequalities (1959:216-7, 242).[33]

Among women, neither control of the means of production nor authority has any effect on subjective class identification, contrary to prediction. This may in part be because women do not earn much more when they get into the employer or command classes (so there is no indirect effect through income), or because they may stress their husband's characteristics more than their own (e.g., Rossi, et al., 1974:178), or may require some more fundamental revision of Marx's and Dahrendorf's analyses; unfortunately we have no data with which to pursue the matter further. We now turn to an analysis of several work-related and political attitudes to give a broader perspective on the subjective consequences of class position.

Job Satisfaction Satisfaction with one's job is not at all closely linked to the usual Blau-Duncan stratification variables, a somewhat surprising but nonetheless well-established finding (e.g., Jencks et al., 1972:Ch. 8), and this seems to hold for Marx's and Dahrendorf's variables as well. Among men, but not among women, Marx's employers are slightly but significantly more satisfied than workers, as his alienation theory predicts. Dahrendorf does a little better--for both men and women his command class is significantly more satisfied. Among men, these results are at least

partly due to the fact that the employer or command classes earn more; about 40 percent of the effect of control and 50 percent of the effect of authority is indirect through income.

Union Membership Marx's conception of unions as a vanguard in heightening the class consciousness of the proletariat appears to have some validity since, among men but not among women, the worker class is significantly more likely to belong to unions even controlling for all the traditional stratification variables. Dahrendorf's similar conception of unions as representing the manifest interests of the obey class receives even more support in the data, with obey class members significantly more likely to belong to unions than command class members for both sexes. Furthermore, none of these effects is indirect through income.

For union membership, unlike income and most of the other variables we are dealing with, there is evidence of some kind of interaction between control of the means of production and authority, since the linear and additive effects are substantially smaller than the variance explained by a model including all interactions and non-linearities (compare lines 2 and 7). A good part of this is because our linear and additive model neglects the petit bourgeoisie, which is strongly anti-union, a finding quite consistent with Marx's observation that the petit bourgeoisie is generally a reactionary force in advanced capitalist societies (Marx and Engels, 1848:23; 1885:106-17).[34]

Political Attitudes and Affiliations We have seen that Marx and Dahrendorf have conflicting expectations about the politicizing effects of class position, Marx expecting a strong relationship and Dahrendorf none at all. Our data support both theorists, a situation which is of course possible only because their concepts of class are different. In the first place, although Marx's employers are, surprisingly, no more likely than workers to express confidence in business leaders, they are noticeably more likely to lack confidence in labor leaders, their presumed antagonists in a Marxian class conflict; the difference is appreciable and statistically significant for both sexes. Employers are also significantly more likely to oppose the

Democratic party, the presumed vehicle of their opponent's class interests, and support the Republicans; these differences are particularly marked for women, for whom control over the means of production is second only to father's education as a predictor of party identification. Given the comparatively low level of class voting in the United States (Alford, 1963:101; Rose and Urwin, 1969:67) and the Democratic Party's position, which can hardly be called socialistic much less revolutionary, these are important effects. The effect on perceived political liberalism-conservatism is, however, insignificant. Little, if any, of these political differences come about because employers earn more than workers. In the second place, as Dahrendorf argues, authority in the workplace has virtually no politicizing effect either for men or women. Its only significant effect is on confidence in business leaders and this holds only for women. None of the effects on the other political variables is significantly different from zero.

Implications Taken together, these results support both Marx and Dahrendorf. They suggest that the American public exhibits at least a very limited form of class consciousness, with objective class position creating some differences in attitudes and behavior, and this at least raises the possibility of class conflict. Nonetheless these differences are mostly small; and there is certainly no evidence that the proletarian revolution is just around the corner.

For these variables, unlike income, our continuous version of authority was no better (although no worse) than Dahrendorf's dichotomous version (indeed, the results are so close that we have shown only the continuous version in Table 3). On the whole it appears that our modification to Dahrendorf gives quite plausible account for links between class and income but offers little new insight into the effects that objective class position has on class consciousness and class conflict.

Family Background and Class Position

Having shown that acquiring control over the means of production and exercising authority in the workplace have important consequences, it is useful to look briefly at their causes, in particular the influence of family background and education.

Surprisingly, coming from a family with high occupational or educational status confers very little advantage in gaining access to privileged positions in either Marx's or Dahrendorf's sense. Family background, measured conventionally by father's education, occupational status, and number of siblings, explains very little about who controls the means of production (1.6% of the variance for men and 0.3% for women) or about who gains positions of authority (0.9% for both men and women); in sharp contrast, they explain 12.2 percent of the variance in men's occupational status and 13.2 percent for women. Respondent's own education does have some influence for men, although not for women, but even taking education and family background together explains little more about who controls the means of production (2.2% of the variance for men and 0.3% for women) or about who exercises authority (2.3% and 1.4% respectively); by way of comparison, these variables explain over a third of the variance in occupational status (37.3% for men and 37.5% for women).[35] However, it is not unlikely that knowing whether the father controlled the means of production would tell a good deal about whether his child controls the means of production and at least possible that knowing whether the father exercised authority would tell something about his child's authority position.

Replication and Extension: Data from Great Britain

We present here a preliminary analysis of data from Great Britain which serves two purposes. First, we show that most of the results we presented confirming Marx's and Dahrendorf's predictions are not unique to the United States, a most unusual society in many ways, but appear in another advanced industrial society as well. Second, we present some evidence on the transmission from generation to generation of class position as defined by Marx and Dahrendorf, data which we do not as yet have from a U. S. sample.[36] The British data are from a study of political attitudes conducted by Butler and Stokes (1969) in four waves of interviewing from 1963 to 1970; we restrict our analysis to the 686 men in 1964 who were currently employed.[37] So far as possible we have defined the variables in the British data so as to be comparable with those in the U. S. data. The measures available

are appropriate for testing Marx's and Dahrendorf's theories although not for testing our modifications to Dahrendorf, as no continuous measure of authority is available.[38] Our purpose here is to test these theories, not to conduct a comparison of the U. S. and Britain, and, in fact, differences in the measures, in the available variables, and in the models estimated make any detailed comparison between British and U. S. coefficients unwise.[39] On balance, the British data clearly confirm both Marx's and Dahrendorf's predictions. Control of the means of production has a strong effect

(Table 4 about here)

on income, as large as that of education or occupational status, and authority also has an appreciable and statistically significant, albeit smaller, effect (see Table 4). Taken together, control of the means of production and authority increase the variance in income explained by the traditional Blau-Duncan variables from twenty-two to thirty-three percent, an increase of eleven percent, or one half. Class, in both Dahrendorf's but especially Marx's sense, has a strong effect on attitudes in Britain, probably indicating a higher level of class consciousness there than in the U. S., as some have claimed (Alford, 1963:109; Lipset, 1966:163). For men, the two class models together result in an increase in explained variance over the usual Blau-Duncan variables averaging four percent for class identification, union membership, voting choice, party identification and self-assessed liberalism/conservatism. Marx's control of the means of production is clearly a significant determinant of all attitudes except liberalism. Dahrendorf's authority is significantly related to class identification and union membership, as he predicted, but also to the overtly political variables, contrary to his claim that politics are too remote from the workplace for there to be any appreciable link and unlike the U. S. situation. So on the whole it seems that Marx's and Dahrendorf's analyses apply not only to the United States, but, if anything, apply even more strongly to Great Britain, the first but now one of the poorer capitalist societies.[40]

In Britain it seems that there are two parallel but quite distinct processes by which status is passed on from one generation to the next, one centering on the intergenerational transmission of education and occupational status and the other

Table 4. Control of the means of production and authority as determinants of income, class identification and attitudes relating to class conflict. For employed British men.

	Men					
	Personal income	Class identif.	Union membership	Vote in 1964	Political party ID	Political attitudes
Panel A. Percent of variance explained, R^2						
1. Baseline: minimum Blau-Duncan model with father's occupational status, own education and occupational status	22.0	16.6	6.2	11.2	12.7	3.5
Panel B. Increase in R^2 from adding the indicated variables to Model 1						
2. Maximum: Model 1 plus all interactions, etc.[1]	11.0*	2.8*	8.5*	4.3*	3.6*	2.5*
3. Marx: control	9.2*	2.5*	6.7*	3.0*	2.7*	0.5
5. Dahrendorf: authority	6.1*	1.4*	4.9*	2.6*	2.1*	1.8*
7. Marx & Dahrendorf[2]	10.6*	2.7*	8.0*	3.8*	3.3*	1.8

* Increment in R^2 over model 1 significant at $p<.05$.

1 Three dummy variables representing the four cells in the cross-tabulation of control and authority.

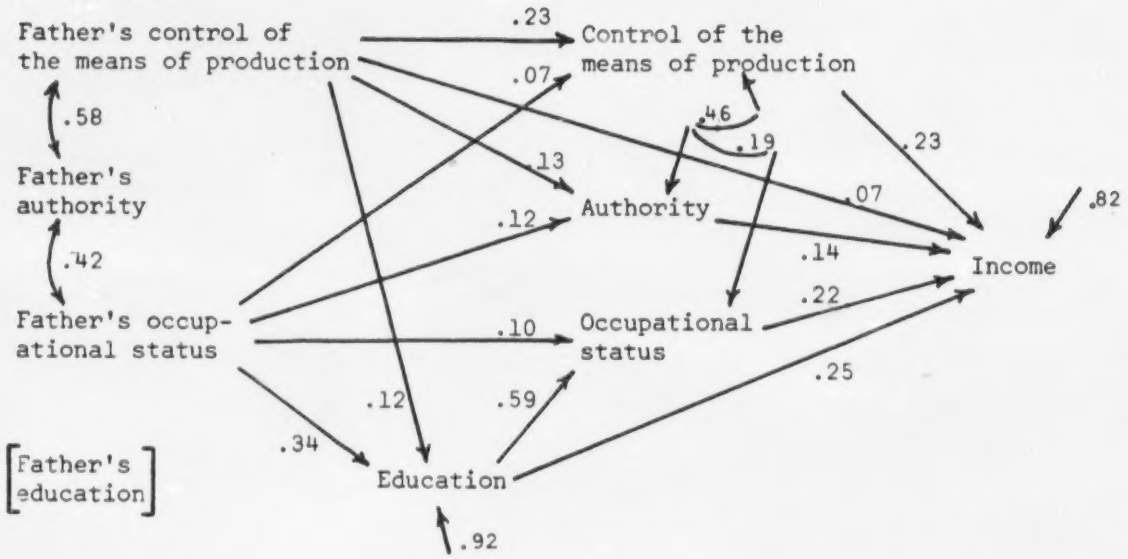
2 Wright and Perrone's model necessarily explains the same variance as this model.

on the transmission of control of the means of production and authority (see Figure 2). As in the U. S., a good deal of the transmission of occupational status from father to son is indirect through education, that is, fathers with high status jobs manage to get their sons more education and that in turn allows the sons to get high status jobs and earn larger incomes. In contrast, the passing on
(Figure 2 about here)
of control of the means of production, of capital, is almost entirely direct rather than indirect through education; fathers apparently hand over the family farm or business. Father's authority position apparently cannot be passed on at all; having a father in the command class makes no significant difference for the son's chances of getting into that class, although it is an advantage to have a father who controls the means of production or has high occupational status. The two systems of inheritance--hierarchical class as reflected in authority and control of the means of production, and status as reflected in occupational status and education--are only loosely linked to each other, with father's control of the means of production confering a small educational advantage on his son and father's occupational status providing a small, although significant, advantage in gaining control of the means of production or authority.

CONCLUSIONS

Bringing together the very different class theories of Karl Marx and Ralf Dahrendorf, we have described the stratification system that results from the hierarchical organization of work. It involves two theoretically and empirically distinct components, Marx's control of the means of production and Dahrendorf's authority. We showed that in the U. S. (and in Great Britain), position in the hierarchical organiation of work has a profound effect on men's income but that in the U. S. women equally well placed do not by any means receive equal rewards and that this explains a substantial part of the gap between men's and women's income. Hierarchical position also has modest but significant consequences for some subjective elements of class consciousness and class conflict, specifically subjective class identification, job satisfaction, union membership, confidence in the leaders of organized labor, and

Great Britain



United States

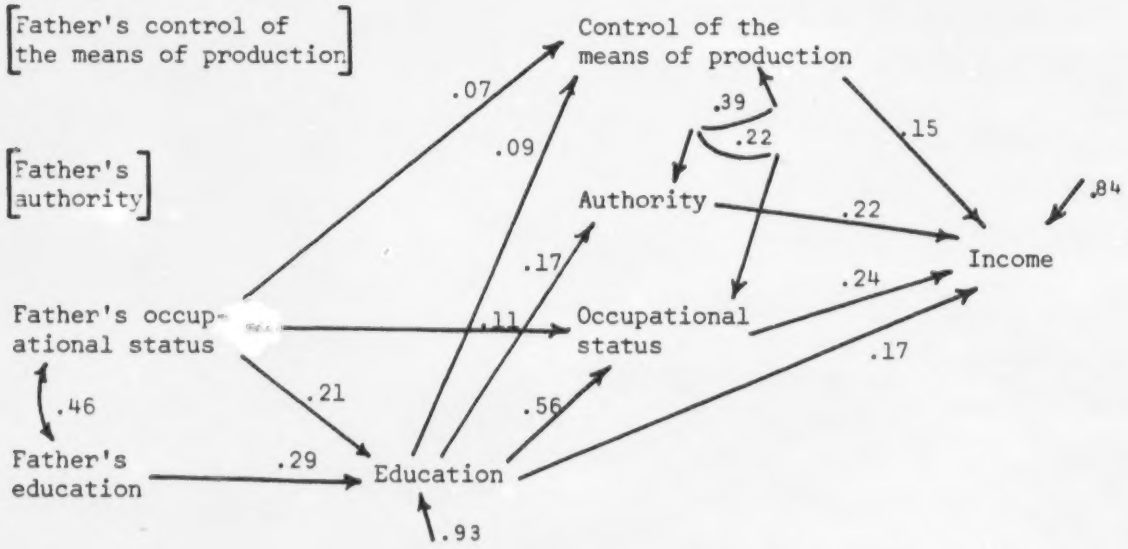


Figure 2 Extension of the Blau-Duncan model to include control of the means of production and authority for Great Britain and the U.S. separately; men only. Correlations less than .2 are not shown and paths which are not statistically significant are omitted from the model. Variables shown in brackets are not available in the present data.

political party preference. This provides evidence that in the United States class position as defined by Marx and Dahrendorf leads to at least some limited perception of differences in class position and class interests and possibly to some conflict over these interests in the political arena.

Theoretical Implications

These results offer substantial, although not unequivocal, support for Marx's and Dahrendorf's theories. Their predictions on income are strongly supported for men but not for women. Although it is possible that the failure for women reflects some more fundamental weakness, we are inclined to believe that it reflects instead the special circumstances women find themselves in, since there are persuasive reasons to think the labor market works differently for them (e.g., discrimination, differential attachment to the labor market and consequent differences in returns to investment in human capital, differences in preferences, etc.) and substantial empirical evidence that education, occupational status and other conventional variables have very different effects on women's than on men's earnings (e.g., Featherman and Hauser, 1976; Mincer and Polachek, 1974; Suter and Miller, 1973; Treiman and Terrell, 1975a).

Marx's and Dahrendorf's predictions about the other consequences (or lack of them) of class position receive moderate support. The effects on attitudes indicative of class consciousness are virtually all in the predicted direction, most are statistically significant, and most are reasonably large in comparison to the (modest) effects of traditional Blau-Duncan stratification variables; however, none of the stratification variables, traditional or otherwise, have particularly large effects in any absolute sense. It may be that stratification generally has little effect on class consciousness and conflict but we are inclined to suspect that the present modest results are due in part to measurement error in the consciousness and conflict variables and in part to peculiarities of the U. S. where, compared to other countries, class polarization appears to be modest (e.g., Alford, 1963; Rose and Urwin, 1969). Our replication on British data lends some support to the latter claim since class position is far more strongly tied to attitudes there. Moreover, we have seen that both

Marx and Dahrendorf offer some theoretical reasons for expecting only modest effects in some circumstances.

Modifications to Dahrendorf's Theory The results for men's income clearly support our analysis of the relation between authority and income, and support the claim that authority is best viewed as a matter of degree, not a simple dichotomy. If, for the reasons set out above, we assume that the results for women's income do not invalidate the whole approach, it seems quite clear that income is a function of the number of levels of subordinates and not simply a matter of having some versus none, as Dahrendorf would have it; the upper and lower command classes have quite different incomes. The results on attitudes reflecting class consciousness and class conflict are indecisive, the continuous version of authority being no better and no worse than Dahrendorf's original, so the overall advantage seems to lie with the continuous version. Since Dahrendorf originally had no well developed argument about the crucial links between authority and income and our analysis provides both an argument and, following from that, an empirically superior conception of authority, we propose this as a friendly ammendment. It seems to us that this is quite consistent with the main thrust of Dahrendorf's analysis, since the lower command class is advantaged (in terms of authority) relative to the obey class but disadvantaged relative to the upper command class. The simple distinction between command and obey, while attractive and pedagogically convenient, is perhaps one of those many theoretical simplifications which should be abandoned when analyzing the real world.

Hierarchial and Status Systems of Stratification We suggest that societies have not one stratification system but two parallel but distinct systems. Education and occupational status are at the core of one, the familiar "status" stratification system long the focus of research in the Blau-Duncan paradigm. But there is another quite different "hierarchial" system of stratification resulting from the hierarchial organization of work, with Marx's control of the means of production and Dahrendorf's exercise of authority in the workplace its central features. The status and hierarchial stratification systems are distinct but perfectly compatible with each other

and, indeed, strikingly parallel (see Figure 2). Both are based on two modestly correlated but conceptually quite distinct variables. Each component of both systems has important consequences, primarily for income and secondarily for subjective class identification, class consciousness and class conflict in Great Britain and even in the United States, a society often supposed to exhibit little or no class consciousness. It is likely that advantages in both systems are passed on from one generation to the next; we know this is true for the status system in the United States and many other countries but have, at the moment, no comparable data for the hierarchical system in the U. S., although our analysis of British data suggests that control of the means of production, i.e., capital, is passed on from generation to generation while authority is not. Although parallel, the status and hierarchical systems are clearly distinct; control and authority are slightly influenced by father's occupational status and modestly correlated with occupational status but otherwise position in one system is not closely related to position in the other. Conceptions of both systems have a long intellectual history; analysis of the hierarchical system is strongly developed in the theoretical traditions of Marx and Dahrendorf and their respective followers while the Blau-Duncan status stratification tradition has, conversely, concentrated particularly on empirical research. Both systems of stratification are important to an understanding of income inequality, class consciousness and class conflict; neither is as successful alone as both are together. We therefore propose a merger of the two traditions. Formulated as we have suggested here, hierarchical class concepts can easily be added to the Blau-Duncan model and will, as we have shown, greatly increase both our understanding of stratification and our ability to explain its consequences.

Appendix Correlations, means and standard deviations separately for men (above diagonal) and women (below diagonal) in the 1973, 1974 or 1976 NORC General Social Surveys. Full time workers only; decimals omitted.

Variables[1]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. Marx: control		405	405	057	107	-076	120	169	298	156	086	169	044	151	095	055
2. Authority (dichot.)	388		906	048	083	-070	144	238	310	190	106	179	024	068	080	062
3. Authority (cont.)	324	923		054	071	-079	174	277	374	215	110	201	035	089	079	056
4. Father's education	049	035	094		461	-384	384	237	101	217	062	124	058	058	181	-022
5. Fa's occup. status	013	056	085	540		-276	344	307	149	219	029	137	055	085	130	-106
6. # of siblings	-032	-086	-102	-357	-295		-256	-203	-091	-132	019	-078	-033	-101	-112	-025
7. Education	026	089	113	433	369	-228		600	364	399	091	222	055	136	165	-068
8. Occup. status	056	162	162	275	288	-276	592		422	408	162	310	142	156	194	003
9. Personal income	036	106	141	168	157	-127	470	445		370	173	076	136	098	171	129
10. Class indentif.	030	066	072	201	206	-173	254	282	231		192	140	161	116	188	015
11. Job satisfaction	024	118	136	000	008	-076	112	208	161	058		116	160	037	089	048
12. Union membership	073	164	140	069	096	-121	072	163	-054	103	060		029	292	169	008
13. Conf. in business	-032	075	077	112	-008	-049	023	059	-003	057	142	081		-125	150	162
14. Conf. in labor	141	080	083	033	069	-014	038	116	124	006	043	062	-228		152	161
15. Party ID	145	072	073	175	115	-119	030	082	055	125	-028	115	154	130		274
16. Political attitude	031	011	-015	-062	-109	148	-095	-003	-101	-065	-019	-038	135	031	124	
Means																
Men	.11	.44	.30	9.0	32	4.0	12.7	42	14613	2.5	3.3	1.7	2.2	2.1	2.5	4.0
Women	.06	.29	.19	9.8	35	4.0	12.5	44	7942	2.4	.80	1.8	.68	2.2	2.3	3.9
Std. Devs.																
Men	.31	.50	.38	4.2	22	3.3	3.3	24	8350	.59	3.4	.47	2.1	.66	1.9	1.3
Women	.23	.46	.32	4.1	23	3.2	2.7	21	5190	.55	.75	.37	.64	.62	1.8	1.3

1. Selected variables only; the full correlation matrix, too large to reproduce here, is available on request. N=1120 for men and 598 for women.

FOOTNOTES

[1] Theoretical critiques of Marx are too numerous to mention here. Dahrendorf's work, being a century more recent, has been the subject of a more manageable number of critical assessments (see Giddens, 1973; Hazelrigg, 1972; Turner, 1973; Weingart, 1969).

[2] To our knowledge, the only empirical test of Marx's class model has been by Wright and Perrone (1977), which we discuss later in detail. Two empirical studies of Dahrendorf's theory have been attempted. One used occupation as a surrogate for authority (Lopreato, 1968)--a procedure which we show to be unreasonable. The second dealt with topics somewhat different from those we discuss here (Fox et al., 1977).

[3] The only previous analysis of this sort (Wright and Perrone, 1977) confined itself the consequences of class position for income inequality among men.

[4] Following general usage, we reserve the label "Marxian" to refer specifically to Marx's own work, and the label "Marxist" to refer to that of his successors.

[5] Although Marx never defines the petit bourgeoisie as anything but smaller capitalists--"the lower middle class, the small manufacturer, the shopkeeper, the artisan" (Marx and Engels, 1848:25)--it seems reasonable to define them as owners of the means of production who do not purchase the labor power of others, as do Wright and Perrone (1977) although the difference between, for example, a self-employed plumber who works alone (petit bourgeois) and one who also has an assistant (employer) is very slight. The empirical evidence, however, indicates that our definition is preferable particularly with regard to income since failing to distinguish petit bourgeois from employers noticably reduces Marx's ability to explain income differences.

[6] Karl Marx (1902) as quoted and translated by Dahrendorf (1959:11).

[7] Whether Marx means that the working class will become absolutely worse off or only relatively worse off has been the subject of considerable debate (see Giddens, 1973:36-7; Sowell, 1960). However, Marx claims that even if the working class becomes absolutely better off, it is still worse off relative to the capitalist class because of increases in the latter's wealth:

> If the working class has remained "poor," only "less poor" in proportion as it produces for the wealthy class "an intoxicating augmentation of wealth and power," then it has remained relatively just as poor. If the extremes of poverty have not lessened, they have increased, because the extremes of wealth have (1867b:715-6).

[8] Marx is somewhat ambiguous as to what constitutes class consciousness and refers in various works to at least three types of situations: the sharing by class members of common interests regardless of their content; the awareness of class members that they constitute a class and share interests in common; and the active mobilization of members of a class to pursue common interests (Giddens, 1973:93).

[9] In our use of the labels "command" and "obey" class we follow Lopreato (1968). Dahrendorf never labeled his classes.

[10] Dahrendorf notes that some occupational categories, such as foreman and bureaucrat, are especially difficult to classify. He refers to foremen as "men in the middle" but later mentions that "the upper part of the dichotomy begins not far from the bottom layer of social stratification and includes all those who have even a minimal share in the exercise of authority" (1959:262,287). Regarding bureaucrats, who are subject to the authority of others but also exercise it themselves, Dahrendorf concludes "by virtue of their positions, bureaucrats are members of the ruling class of industry and thus share its latent interests" (1959:256). Since both foremen and bureaucrats are placed by Dahrendorf in the command class, just as they would be using our operationalization, we have not assigned them to the "classless" category or excluded them from the analysis, as did Lopreato (1968).

[11] Both human capital and marginal productivity theories are now highly developed and rigorously formalized but we cannot attempt a full exposition here. Good treatments are found in Mincer, 1974:Chs. 1 and 2; Rees, 1973:Chs. 4 and 5.

[12] The argument can also be applied to Marx's theory. Although they employ workers and own the physical means of production and so are capitalists in Marx's scheme, many doctors, lawyers, plumbers, television repairers, and the like are mainly renting out their human capital and being paid primarily for that rather than for their (often meager) physical capital. These "human" capitalists are in many ways

similar to physical capitalists; they acquired their capital at the cost of time and money, allow it to be used in business and receive payment for doing so, and employ the labor of others to make their capital more productive (e.g., a lawyer has a secretary, a doctor has a nurse). A natural extension of Marx would be to include human capital as well as physical capital as part of the means of production (Giddens, 1973:128).

[13] Parallel arguments could be made for Marx's employers, suggesting an alternative to Marx's theory about why they get greater pay than workers.

[14] The definition given here and in Figure 1 differs slightly from Wright and Perrone's in that they use a stricter interpretation of Marx's criterion of ownership of the means of production and so exclude from their capialist class those who control but do not own these. Such individuals are classified along with their manager class. In a personal communication to the authors, Erik Wright indicated that our model was essentially the same as his and Perrone's, except that ours had the advantage of placing corporate directors in with the capitalist class but the disadvantage of including in this class some "middle managers" who might not be directly responsible to anyone above them but nonetheless do not control the means of production.

[15] Giddens (1973:204-5) also recognizes the necessity of assessing the independent influence of authority apart from that of the more Marxian variables usually analyzed.

[16] Both must be implemented by three distinct dummy variables (or the equivalent), e.g., for Wright and Perrone, employer (versus all others), manager, and petit bourgeois and for Marx and Dahrendorf, employer, command class, and petit bourgeois (classless group).

[17] Furthermore we will see that there are good theoretical and practical reasons for distinguishing between higher and lower level supervisors and, while it is easy to modify Dahrendorf's scheme to include this distinction, modifying Wright and Perrone's is not so attractive since it would leave no less than six classes

with complex and sometimes obscure relations.

18 Hierarchical position, our key structural variable, is not asked in 1975.

19 The 1976 GSS is actually a split sample--one-half block quota, like the previous samples, and one-half full probability (NORC, 1976:91-4).

20 Twenty-eight percent of employed women worked part-time compared with only nine percent of employed men. Women worked an average of 35 hours per week while men averaged 43 hours per week.

21 The questions are:

1. Do you have a supervisor on your job to whom you are directly responsible?

   1a. Does that person have a supervisor on the job to whom he or she is directly responsible?

2. In your job, do you supervise anyone who is directly responsible to you?

   2a. Do any of <u>those</u> persons supervise anyone else? (NORC, 1976:80).

Like Wright and Perrone (1977:36), we find that a majority of elementary and secondary teachers claimed to supervise people even though, with few exceptions, they were referring to their students. Following Wright and Perrone's suggestion, we reclassified these teachers as supervising no one.

22 We call this class "employers," rather than "capitalists," following Wright and Perrone's (1977:36) suggestion, since they are mostly small business people. Sixty-five percent of our male employers and fully ninety-five percent of our female employers earned less than $25,000 per year.

23 For simplicity of notation we use this terminology although the criterion of purchase of the labor power of others or sale of one's own labor power is also involved.

24 The mean income for men in the petit bourgeoisie (classless group) is $13,043, compared with $13,785 for workers and $21,550 for employers in Marx's class model and compared with $12,147 for obey class members and $17,476 for command class members in Dahrendorf's scheme.

25 Since the NORC occupation variables were not originally coded in SEI units,

we used the coding procedures in Featherman, Sobel and Dickens (1975).

[26] In 1973 half of the respondents were given an additional choice of "upper middle class" which we combine with the response "middle class."

[27] We experimented with a trichotomous version of Marx which makes further distinctions within the working class (between workers only one level below the top of the hierarchy and those further down), corresponding to the refinement we made in Dahrendorf's original dichotomous concept. But that explains no more of the variance in either men's or women's income than the simple dichotomy, suggesting that Marx was correct in arguing that the class structure as he defined it is essentially dichotomous.

[28] Some of the additional income obtained by those who control the means of production may be due to their possession of human capital rather than, as Marx argues, to their ownership of physical capital. With the data at hand it is difficult to separate the human capitalists from Marx's employer class very reliably but we can make a rough attempt by assuming that lawyers, doctors, accountants and other professionals are mainly selling their human capital (i.e., their skills and services); giving Marx all possible benefit of the doubt, we have not classified as human capitalists the many non-professional occupations whose returns may well reflect more human than physical capital (e.g., plumber, mason, travel agent, television repairer). With this restrictive defition, human capitalists make up some nineteen percent of all men in the employer class and twenty-nine percent of the women. As predicted by economic theory, human capitalists do earn more than other people even controlling for the basic Blau-Duncan variables of model 1; men in this class earn $3,977 more and women $5,323 more, both figures being statistically significant. Nonetheless, male physical capitalists do even better than human capitalists, getting an extra $6,061; female physical capitalists however earn $1,815 less than other women, a figure which is, however, not significantly different from zero. So, on this rough test, human capital theory may refine Marx but by no means topples him.

[29] The variance explained in log income is noticeably lower; however, the success of the various theories, relative to the baseline model or to each other, is essentially the same and they together increase the explained variance by nearly half. Following the nomenclature of Table 2 we have for log income:

Model	Men	Women
1. Baseline: Blau-Duncan variables only. R^2 =	13.4	19.4
Increases in R^2 by adding:		
2. Maximum: all interactions, etc.	5.4*	1.9
3. Marx. control of the means of production	2.2*	0.4
4. Dahrendorf: authority (dichotomous)	3.4*	0.1
5. Improved Dahrendorf: authority (continuous)	4.4*	0.4
6. Marx and Dahrendorf: control and authority (dichotomous)	4.1*	0.7
7. Marx and improved Dahrendorf: control and authority (cont.)	4.9*	1.1

(*indicates that the increase in variance explained over Model 1 is significant at $p<.05$.). Adding a variety of additional determinants of income suggested by Treiman and Terrell (1975a)--experience (both squared and unsquared versions), hours worked per week, number of children under age six, and number of children aged six to 17--we find that both authority and control of the means of production remain significant determinants of men's incomes, adding some five percent to the explained variance. Education and work experience are the most important determinants in this formulation with authority (continuous version) sharing third place with occupational status; control of the means of production comes next.

[30] A predicted mean income for women standardized for sex differences in the distribution of control and authority was obtained by substituting the male means for these two variables into the female regression equation. A prediction controlling for differences of process was arrived at by substituting the male unstandardized regression coefficients (i.e., b's) associated with control and authority for the female coefficients in the same equation; and a prediction taking differences of both distribution and process into account was obtained by substituting both the male means and regression coefficients (for control and authority only) in the female equation.

[31] The absence of such effects would weaken but not unambiguously disprove either Marx or Dahrendorf since both argue that conflicting class interests inhere

in classes by virtue of their nature regardless of whether or not they have any attitudinal or behavioral manifestations. However, one would then have some reservations about such untestable theories both on epistemological grounds (e.g., Ayer, 1936) and as explanations of attitudes and behavior in the real world.

[32] Details are available on request.

[33] There is a technical problem in that measurement error attenuates estimates of indirect effects through income more than estimates of direct effects (e.g., Blalock, 1961:147-50), so our model somewhat overestimates the direct effects of class position. Unfortunately, we have no reliability estimates with which to make the appropriate corrections, but this is not a serious problem for variables other than class identification, since there the indirect effects through income are small or nonexistant and no reasonable correction for unreliability would make any practical difference.

[34] This is one of the very few instances where there is any reason to distinguish petit bourgeois from workers in Marx's scheme or classless individuals from the obey class in Dahrendorf's.

[35] The standardized partial regression coefficients are:

	Men		Women	
	Control	Authority	Control	Authority
Father's education	-.03	-.03	.05	-.04
Father's occupation	.08*	.05	-.02	.03
Number of siblings	-.05	-.03	-.02	-.07
Education	.09*	.13*	.01	.08

(The * indicates an effect significantly different from zero at $p<.05$)

[36] We are in the process of obtaining such data and will present them briefly in the final version of the paper.

[37] The first wave (1963) was a multi-stage stratified sample of the adult population of England, Scotland, and Wales, aged 20 or over and living in private households or institutions. The second wave (1964), which we here analyze, since the relevant stratification variables were asked, included re-interviews with persons in the 1963 sample as well as a small proportion of interviews added to make the sample representative despite the loss of some persons who could not be re-interviewed.

We have not been able to analyze working women in Britain because the number of cases is very small and the data do not allow us to make the crucial distinction between full time and part time workers.

38 To take into account peculiarities of the British education system, education is coded as in Treiman and Terrell (1975b:567-72, 580-1). Lacking a socio-economic index for Britain, we coded son's (and father's) occupation according to the son's weights from a canonical procedure using father's occupation, education, and income as the criteria (for details see identifying reference, 1977). Father's and son's control of the means of production and authority exercised were derived from a variable which differentiated: 1) self-employed with employees, 2) self-employed without employees, 3) managers, 4) foremen and supervisors, and 5) other employees who have no direct managerial or supervisory responsibilities. In operationalizing control of the means of production we classified category 1 as employers, 3, 4 and 5 as workers, and 2 as petit bourgeois. We operationalized authority by classifying categories 1, 3, and 4 as command class, 5 as obey class, and 2 as classless. This is identical to our classification in the U. S. except that in the British version of Marx's model a small number of executive directors are classified in the worker rather than the employer class. Personal income ranges in thirteen categories from less than £250 to over £1,950 and we converted this metric to pounds using the midpoint of categories (except for the highest open-ended category which was estimated at £2,852).

39 The senior author is conducting a six nation comparative study which will be reported separately.

40 Although a close comparison of the United States and Britain is not warrented because of differences in measurement and models, these results do at least suggest that the income attainment process is quite similar in the two countries except that income is more predictable in Britain, i.e., that there is more structurally determined inequality in income. It is also noteworthy that control of the means of production seems more important than authority in Britain, quite the reverse of the U. S. pattern (and this is true even using the dichotomous version

of authority in the United States); apparently Britain is more of a classical capitalist society, as Marx surmised (1867a:449).

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